AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (previously amended) A process of aligning and connecting at least one optical fiber to at least one optoelectronic device to facilitate the coupling of light between at least one optical fiber and at least one optoelectronic device, comprising the steps of:

positioning at least one optical element in a position relative to at least one optoelectronic device in such a manner that when the device and element are in a position proximate to each other, they would be in optical alignment, wherein the at least one optoelectronic device is an array of vertical cavity surface emitting lasers;

depositing a first non-opaque material on the first end of at least one optoelectronic device; and

fixating the first end of at least one optical element proximate to the first end of at least one optoelectronic device in such a manner that the first non-opaque material contacts the first end of at least one optoelectronic device and the first end of at least one optical element.

2. - 3. (canceled)

4. (previously amended) A process as in claim 1, wherein the vertical cavity surface emitting laser is an oxide vertical cavity surface emitting laser.

5. (original) A process as in claim 1, wherein at least one optoelectronic device is a photo-detector.

6. (original) A process according to claim 1, wherein the first non-opaque material comprises an adhesive.

7. (original) A process according to claim 6, wherein the first non-opaque material comprises an UV optical adhesive.

8. (original) A process according to claim 1, wherein the first non-opaque material functions to provide an optical path.

9. (original) A process according to claim 1, wherein the first non-opaque material functions to provide mechanical stability.

10. (original) A process according to claim 1, wherein the first non-opaque material comprises a gel.

11. (original) A process according to claim 1, wherein the at least one optical element is included in an array of optical elements.

12. (original) A process according to claim 1, wherein at least one optical element is an optical fiber.

13. (original) A process according to claim 1, wherein at least one optical element is a MT-type connector.

14. (original) A process according to claim 1, wherein at least one optical element is a ferrule.

15. (original) A process according to claim 14, wherein at least one optical element is a MT-like ferrule.

16. (original) A process according to claim 1, wherein at least one optical element is a lenslet array.

17. (original) A process according to claim 1, wherein at least one optical element is a diffractive optical element.

18. - 102. (canceled).

103. (previously amended) A process of aligning and connecting at least one optical fiber to at least one optoelectronic device to facilitate the coupling of

light between at least one optical fiber and at least one optoelectronic device, comprising the steps of:

a) holding at least one optical element at the end of a first member of an alignment system, and holding at least one optoelectronic device on a second member of the alignment system, wherein the at least one optoelectronic device is an array of vertical cavity surface emitting lasers;

b) visually locating a target associated with at least one optoelectronic device;

c) illuminating at least one optical element with a light so that at least one optical element emits optical energy onto at least one optoelectronic device;

d) changing the relative positions of the optical energy and target so that the optical energy is visually aligned with the target; and

e) bringing the first end of at least one optical element proximate to a first end of at least one optoelectronic device in such a manner that a gap exists between the first end of at least one optoelectronic device and the first end of at least one optical element.

104. (original) A process according to claim 103, wherein visually locating a target comprises employing human vision and a microscope.

105. (original) A process according to claim 103, wherein visually locating a target comprises employing machine vision.

106. (original) A process according to claim 103, wherein visually aligning the optical energy with the target comprises employing human vision and a microscope.

107. (original) A process according to claim 103, wherein visually aligning the optical energy with the target comprises employing machine vision.

108. – 109. (canceled).

110. (original) An process as in claim 103, wherein the vertical cavity surface emitting laser is an oxide vertical cavity surface emitting laser.

111. (original) An process as in claim 103, wherein the optoelectronic device is a photo-detector.

112. (original) A process according to claim 103, wherein a side-view camera and a video-image-measuring system are used to bring the first end of at least one optical element proximate to the first end of at least one optoelectronic device.

113. (original) A process according to claim 103, wherein laser triangulation is used to bring the first end of at least one optical element proximate to the first end of at least one optoelectronic device.

114. (original) A process according to claim 103, wherein interference microscopy is used to bring the first end of at least one optical element proximate to the first end of at least one optoelectronic device.

115. (original) A process according to claim 103, wherein the first member of an alignment system is a high precision arm.

116. (original) A process according to claim 103, wherein the second member of an alignment system is a high precision stage.

117. (original) A process according to claim 103, wherein at least one optical element is an array of optical fibers.

118. (original) A process according to claim 103, wherein at least one optical element is an array of optical fibers.

119. (original) A process according to claim 103, wherein the optical element is an optical fiber.

120. (original) A process according to claim 103, wherein the optical element is a MT type connector.

121. (original) A process according to claim 103, wherein the optical element is a ferrule.

122. (original) A process according to claim 103, wherein the optical element is a MT-like ferrule.

123. (original) A process according to claim 103, wherein the optical element is a lenslet array.

124. (original) A process according to claim 103, wherein the optical element is a diffractive optical element.

125. - 136. (canceled)

137. (original) A process according to claim 1, wherein the positioning at least one optical element in a position relative to at least one optoelectronic device includes aligning 12 optical fibers relative to an optoelectronic device.

138. (canceled)

139. (new) A method of aligning and connecting at least one optical element to at least one optoelectronic device comprising:

positioning at least one optical element in a position relative to at least one optoelectronic device in such a manner that when the device and element are in a position proximate to each other, they would be in optical alignment, wherein the at least one optoelectronic device is an array of photo-detectors;

depositing a first non-opaque material on the first end of at least one optoelectronic device; and

fixating the first end of at least one optical element proximate to the first end of at least one optoelectronic device in such a manner that the first non-opaque material contacts the first end of at least one optoelectronic device and the first end of at least one optical element.

140. (new) The method of claim 139, wherein the first non-opaque material comprises an adhesive.

141. (new) The method of claim 139, wherein the first non-opaque material comprises an UV optical adhesive.

142. (new) The method of claim 139, wherein the first non-opaque material functions to provide an optical path.